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State of Missouri
Division of Labor Standards
Department of Labor and Industrial Relations



M 1988 Statistical Report MINING

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DOCUMENTS DIVISION

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John Ashcroft
Governor

Forward

Missouri's minerals production, coal, granite and shale showed some decreases for 1988. Clay, copper, iron, lead, silica sand and zinc showed an increase for 1988.

It is our privilege to report, like 1986 and 1987, there were no fatalities in Missouri Mines as inspected by this Division in 1988. This makes three (3) years of mining without a fatality.

Our Mine Safety Training Section trained 3,186 miners in 1988. We are still operating the program with two and one-half instructors. We are still active in Mine Rescue Training also.

Missouri's mine safety records reflexes the on-going practice of good safety habits in the mining industry.

The Division of Labor Standards is happy to see the continuing cooperation among all the people involved in the safety & health training and awareness programs.

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Missouri Minerals Production

Kind of Mines	Tons Produced	
	1987	1988
Clay	748,743	758,679
Coal	4,229,109	4,057,955
Copper	53,087	90,550
Granite (Felsite)	378,988	373,231
Iron	823,070	898,529
Lead	420,877	518,476
Shale	1,100,672	1,026,447
Silica Sand	765,144	827,256
Zinc	72,556	85,127

Concentrates: Lead-Zinc-Copper
Iron-Pellets

Clay

Clay production in Missouri for 1988 showed an increase of 9,936 tons compared to 1987.

Leading Clay Producers In 1988

Operators	Tons Produced
A.P. Green	214,995
Lowe's Southern Clay	162,777
River Cement Co.	108,930
Harbison-Walker Co.	38,372
Southern Clay, Inc.	34,757
Arthur Dillon Clay Mining	34,526

1979-1988 Clay Production Record

Year	Tons Produced
1979	1,278,876
1980	1,074,509
1981	836,959
1982	649,613
1983	659,192
1984	841,605
1985	727,682
1986	582,524
1987	748,743
1988	758,679

Clay

Operators	# Employed	Tonnage
A.D. Willis & Son	1	10
Alsey Refractories Co.	4	27,081
A. P. Green	15	214,995
Arthur Dillon Clay Mining	2	34,526
Dillion Clay Mining Co.	6	30,433
Forest Johnson Clay Co.	5	33,516
Harbison-Walker Co.	5	38,372
Kasten Clay Products	2	18,017
Langenberg Mining Co.	2	17,922
Lowe's Southern Clay	115	162,777
National Refractories, Inc.	0	32,931
River Cement Co.	25	108,930
Southern Clay, Inc.	17	34,757
Ralph Case Mining & Excavating	1	4,412

Coal

Coal production for 1988 showed a decrease of 171,154 tons compared to 1987.

1988 Leading Coal Producing Counties

Randolph	3,224,922
Barton	479,882
Bates	139,634
Vernon	110,201
Ralls	68,951
Putnam	34,365

1988 Three Leading Coal Producing Companies

Associated Electric Corp., Inc.	2,423,183
NEMO Coal Co.	801,739
P & M Coal Co. — Empire Mine	469,321

Counties With Most Men Employed in 1988

Randolph	435
Bates	190
Barton	75
Vernon	27
Ralls	25
Putnam	25

1979-1988 Coal Production Record

Year	Tons Produced
1979	6,487,445
1980	5,502,523
1981	5,242,031
1982	5,778,223
1983	5,249,461
1984	6,810,336
1985	5,458,589
1986	4,537,859
1987	4,229,109
1988	4,057,955

Coal

Operators	# Employed	Tonnage
Associated Electric Corp., Inc.	296	2,423,183
Am-Earth Corp.	20	46,640
Burbridge Coal Co.	25	68,951
Caylor Construction Co.	7	63,561
Hi-Tech Mining Co.	0	46,774
Missouri Mining, Inc.	25	34,365
NEMO Coal Co.	139	801,739
Pittsburg & Midway Coal Co. — Midway Mine	190	92,860
Pittsburg & Midway Coal Co. — Empire Mine	72	469,321
SunPyre Mining, Inc.	3	10,561

Coal Production By County

County	Tons Produced	Fatal Accidents
Bates	139,634	0
Barton	479,882	0
Putnam	34,365	0
Ralls	68,951	0
Randolph	3,224,922	0
Vernon	110,201	0

Iron

The 1988 production of Iron showed an increase of 75,459 tons compared to 1987.

1979-1988 Iron Production Record

Year	Tons Produced
1979	1,188,634
1980	1,439,300
1981	1,100,000
1982	807,094
1983	877,033
1984	1,506,237
1985	1,214,352
1986	893,945
1987	823,070
1988	898,529

Iron

Operator	# Employed	Tonnage
Pea Ridge Iron Ore Co.	180	898,529

Lead

Lead production in Missouri for 1988 showed an increase of 97,599 tons compared to 1987. Zinc showed an increase of 12,571 tons compared to 1987, and Copper showed an increase of 37,463 tons compared to 1987.

1979-1988 Lead, Zinc and Copper Production Record

Year	Tons Lead Produced	Tons Zinc Produced	Tons Copper Produced
1979	719,553	130,323	31,386
1980	752,060	129,683	26,142
1981	555,776	98,269	15,384
1982	680,310	126,473	11,578
1983	638,474	122,143	13,542
1984	433,929	93,397	9,264
1985	539,459	102,006	38,910
1986	506,219	79,299	71,469
1987	420,877	72,556	53,087
1988	518,476	85,127	90,550

Lead, Zinc and Copper

Operators	Tons Lead Produced	Tons Zinc Produced	Tons Copper Produced	# Men Employed
Cominco Metals, Inc.	98,979	15,046	5,479	139
The Doe Run Co.	326,514	46,417	85,071	296
Asarco, Inc.	92,983	23,664		217

Shale

The 1988 production of Shale showed a decrease of 74,225 tons compared to 1987.

1979-1988 Shale Production Record

Year	Tons Produced
1979	1,353,088
1980	1,144,436
1981	958,652
1982	704,442
1983	825,670
1984	864,916
1985	960,435
1986	953,741
1987	1,100,672
1988	1,026,447

Shale

Operators	# Employed	Tonnage
Buildex, Inc.	22	118,585
Ceramo Co.	3	5,459
Continental Cement Co.	3	156,899
Dundee Cement Co.	31	655,878
Midland Brick & Tile Co.	3	89,626

Silica Sand

The 1988 production of Silica Sand showed an increase of 62,112 tons compared to 1987.

1979-1988 Silica Sand Production Record

Year	Tons Produced
1979	1,175,214
1980	1,072,951
1981	1,130,395
1982	764,283
1983	713,491
1984	692,544
1985	633,202
1986	622,848
1987	765,144
1988	827,256

Silica Sand

Operators	# Employed	Tonnage
Master Bros. Silica Sand	7	53,922
U.S. Silica Co.	40	298,140
River Cement Co.	6	119,821
Unimin Corp.	22	355,373

Granite

Operators	# Employed	Tonnage
G.A.F. Chemicals Corp.	105	367,627
Missouri Red Quarries, Inc.	15	5,213
St. Francois Red Quarries	1	391

Fatal Accidents in Missouri Mines in 1988

No fatal accidents in Missouri Mines as inspected by the Division of Labor Standards in 1988.

Mine Fatalities In Missouri

Year	Lead and Zinc Mines	Coal Mines	Other Mines	Total
1900	52	19	-	71
1901	41	15	-	56
1902	14	10	-	24
1903	13	17	-	30
1904	30	11	-	41
1905	49	11	-	60
1906	58	16	-	74
1907	42	8	3	53
1908	46	10	-	56
1909	65	21	-	86
1910	45	16	-	61
1911	33	8	3	44
1912	28	19	2	49
1913	28	9	4	41
1914	22	19	2	43
1915	41	17	2	60
1916	35	6	2	43
1917	48	14	-	62
1918	16	22	1	39
1919	11	10	1	22
1920	No Report	-	-	-
1921	10	12	-	22
1922	10	6	-	16
1923	9	20	-	29
1924	12	6	-	18
1925	6	11	-	17
1926	11	7	-	18
1927	5	9	1	15
1928	8	11	2	21
1929	2	7	-	9
1930	3	10	3	16
1931	1	6	2	9
1932	2	7	1	10
1933	-	19	2	21
1934	1	13	-	14
1935	2	9	-	11
1936	3	16	1	20
1937	2	14	2	18
1938	5	7	2	14
1939	6	1	-	7
1940	3	7	-	10
1941	4	8	2	14
1942	6	-	2	8
1943	4	7	2	13

Year	Lead and Zinc Mines	Coal Mines	Other Mines	Total
1944	6	4	2	12
1945	6	5	2	13
1946	1	3	2	6
1947	7	3	6	16
1948	2	1	4	7
1949	5	2	5	12
1950	2	1	4	7
1951	2	2	5	9
1952	3	3	4	10
1953	2	-	-	2
1954	-	1	1	2
1955	1	-	2	3
1956	1	-	1	2
1957	3	1	3	7
1958	2	1	3	6
1959	4	-	-	4
1960	-	-	-	0
1961	6	1	-	7
1962	-	-	-	0
1963	-	-	-	0
1964	3	-	-	3
1965	2	-	-	2
1966	1	1	2	4
1967	2	-	-	2
1968	3	-	1	4
1969	2	-	-	2
1970	3	1	-	4
1971	3	1	-	4
1972	2	1	1	4
1973	2	-	4	6
1974	2	-	3	5
1975	-	2	2	4
1976	1	-	-	1
1977	1	-	-	1
1978	-	-	2	2
1979	1	-	-	1
1980	-	-	-	0
1981	1	-	-	1
1982	2	-	-	2
1983	2	1	-	3
1984	0	0	-	0
1985	2	0	-	2
1986	0	0	-	0
1987	0	0	-	0
1988	0	0	-	0
Total	1,000	512	101	1,547

Caves

An act of the 63rd General Assembly authorized and directed inspection of all Caves held open to the public and to require every Cave owner, operator or agent to provide necessary safety guard rails, bridges, ladders, entrances, platforms, walkways, safety barriers, rails, paths and other safety measures in and around any such Cave before it may be opened to the public and to file a complete and true map plan of such cave.

It shall be the duty of the Inspection Section to inspect such Caves at least once a year. The annual inspection fee will be thirty-five dollars (\$35.00).

County	Name of Cave	Address
Barry	Crystal Caverns	Cassville, MO
Boone	Boone Cave	Columbia, MO
Camden	Bridal Cave	Camdenton, MO
Camden	Ozark Caverns	Osage Beach, MO
Carter	Cave Spring Onyx Caverns	Van Buren, MO
Crawford	Cathedral Cave	Leasburg, MO
Crawford	Onondaga Cave	Leasburg, MO
Douglas	Honey Branch Cave	Sparta, MO
Franklin	Fisher's Cave	Sullivan, MO
Franklin	Meramec Caverns	Stanton, MO
Greene	Crystal Cave	Springfield, MO
Greene	Fantastic Caverns	Springfield, MO
McDonald	Ozark Wonder Cave	Noel, MO
McDonald	Bluff Dwellers Cave	Noel, MO
McDonald	Truitt's Cave	Lanagan, MO
Marion	Cameron Cave	Hannibal, MO
Marion	Mark Twain Cave	Hannibal, MO
Miller	Indian Burial Cave	Osage Beach, MO
Miller	Fantasy World Cavern	Osage Beach, MO
Morgan	Jacob's Cave	Versailles, MO
St. Francois	Bonne Terre Cave	Bonne Terre, MO
Shannon	Devil's Well	Van Buren, MO
Shannon	Round Springs	Round Springs, MO
Stone	Talking Rock Cave	Silver Dollar City, MO
Stone	Marvel Cave	Silver Dollar City, MO